PATENT ABSTRACTS OF JAPAN

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(54) DEVICE FOR CONTROLLING BEAD HEIGHT

(57)Abstract:

PURPOSE: To perform the control in the height of a bead corresponding to the change in welding conditions quickly by operating the welding speed after the change by a specific equation at the time when the conditions change is commanded by a conditions commanding means.

$$V = \frac{V_{fo}}{\frac{V_{fo}}{V_o} + (W_w - W_{wo})\,h} \qquad \text{I}$$

CONSTITUTION: In order to control the height of a bead in the welding of a groove a welding is performed by the welding speed found by an equation I. In the equation I, Wwo means the rocking width in one cycle period of the previous time of an arc rocking, Ww the rocking width in one cycle period of this time, (h) a preset bead height, Vfo a wire feeding speed and Vo the initial set value of a welding speed. When a conditions change is commanded by a conditions commanding means while under welding, the control of the bead height is performed by finding the welding speed after the change by an equation II. In the equation II a Vf1 means the wire feeding amt. prior to a welding conditions change, Vf2 the wire feeding amt. after change and V1 the welding speed just before the change.

$$V_1 = \frac{V_{f2}}{V_{f1}/V_1} \qquad \text{II}$$